

# HISTORICAL EVIDENCE OF THE NATIVE PRESENCE OF *SABAL MEXICANA* (PALMAE) NORTH OF THE LOWER RIO GRANDE VALLEY

LANDON LOCKETT

3210 Stevenson Avenue  
Austin, TX 78703, U.S.A.

## ABSTRACT

References by Lindheimer (1845a and b, 1879) and Engelmann (Gray 1850) to Texas central coast palm trees, and a description of the distribution and uses of *Sabal mexicana* Mart. by Sargent (1905, 1922), add to the evidence that a wild population of the species discovered in Jackson and Victoria counties in 1989 is indigenous.

## RESUMEN

Referencias de Lindheimer (1845a y b, 1879) y Engelmann (en Gray 1850) a palmeras en la litoral central de Texas, y una descripción de la distribución y los usos de *Sabal mexicana* Mart. hecha por Sargent (1905, 1922), contribuyen a la evidenciar que una población natural de la especie descubierta en los condados de Jackson y Victoria en 1989 es autóctona.

Lockett and Read (1990) report the discovery of a wild population of *Sabal mexicana* (syn. *S. texana*) along Garcitas Creek (Jackson and Victoria counties), 200 miles north of the Lower Rio Grande Valley (LRGV), the region previously considered the northern limit of the species range (Correll & Johnston 1970, p. 341). Since *S. mexicana* has been widely cultivated in Texas, Lockett and Read (1990) presented historical evidence, going back to the colony established on Garcitas Creek by French explorer René-Robert Cavelier, Sieur de La Salle, in 1685, in order to show that the Garcitas Creek population is not a case of escape from cultivation. Further, Lockett (1991, p. 66) presents historical evidence that the species may have also been native to San Antonio Springs, the headwaters of the San Antonio River. The purpose of the present paper is to present historical evidence discovered since Lockett and Read (1990) and Lockett (1991).

While Ferdinand Lindheimer was collecting specimens in Texas for Asa Gray he corresponded with George Engelmann, and his letters to Engelmann are now in the possession of the Missouri Botanical Garden. The late Minetta Goyne performed the arduous task of translating these letters, and the translation appears in Goyne (1991). As Goyne explains in her preface, the letters were hand written in German under field conditions and in an archaic script. Accordingly she assures us (p. xii) that "Translating the letters was not nearly so great a challenge as deciphering them."



In reading Goyne's entire book, two passages in her translation of Lindheimer's letters caught my attention:

*Passage 1.*—In a letter dated "22 January 1845" from "Camp on the Agua Dulce," which Lindheimer describes as "7 miles from Port Lavaca on the West Matagorda Bay," and in a paragraph titled "*Cactus*." (Goyne 1991, p. 111.)

I collected seeds of the fanshaped agave [*Fächerpulke*] with stem that is often 20' to 40' high;

*Passage 2.*—In a letter from "New Braunfels, Bexar County" dated "beginning of August 1845" and describing the vegetation as one moves inland, up the rivers, from the shore of Matagorda Bay. (Goyne 1991, p. 123.)

Farther upstream occasional single elms, the aforementioned *Yucca* and *Opuntias*, but less vigorous ones, often ... with trunk about 15' high, a palmetto (*Chamaerops palmetto*).

Since the description of the plant referred to in Passage 1 seemed to fit a palm tree better than any known agave, and Passage 2 clearly referred to a palm (even though unclear as to whether the palm or another plant had the 15' trunk), I contacted Goyne, told her of the discovery of *Sabal mexicana* on Garcitas Creek (15 miles north of Port Lavaca), and asked her to re-evaluate her interpretation of the two passages in question. She replied that when she translated the letters she had no idea palm trees could be native near Port Lavaca, but since receiving my communication had decided that the correct interpretation of the handwritten word she had transcribed as *Fächerpulke* (literally "fan *pulque*") was *Fächerpalme* ("fan palm"). The original translation ("fanshaped agave") was due, she explained, to her having interpreted Lindheimer's scrawled *a* as *u*, and his *m*, which had an overly large first loop, as *ke*. As this interpretation yielded a German spelling of the Spanish word *pulque*, which refers to a Mexican alcoholic beverage made from the juice of the agave, she reasoned that, since she knew that Lindheimer had lived in Mexico and liked to play with words, he had used *-pulke* to mean "agave." Her placing the word *Fächerpulke* in brackets in her first translation indicates, of course, her original doubt about the *-pulke* interpretation. Her emended translation of Passage 1, which appears in a signed statement (see Appendix) she sent both to me and to the Texas A&M Press, reads as follows:

I collected seeds of the fan palm [*Fächerpalme*] with trunk that is often 20' to 40' high;

Figure 1 is a photocopy of the numbered paragraph of Lindheimer's letter (1845a) that contains Passage 1. A transliteration of Passage 1, in modern orthography, reads as follows:



4.) Cedras. *C. opuntia*? nur hier hier 1 h. 1/2 h. auf hohem Gebirge  
Lignithum oft 1 h. 1/2 h. dick Blätter - hier find wenig - inoffill-  
mit wenigstens 1 h. 1/2 h. dick Blätter - hier find wenig - inoffill-  
serese. Dama, nur in großen Büschen mit Blätter oft  
20 bis 40 h. 1/2 h. dick, sehr sehr dick. in großen melocactus  
ab der fülle mit der zusammenhangt auf mit 1 h. 1/2 h. dick Blätter

Samen, von der grossen Fächerpalme mit Stamm oft 20 bis 40 Fuss hoch, habe [ich] gesammelt.

Reexamining Passage 2, Goyne determined that the ellipsed word is *nicht* “not,” and that she had accidentally placed the ellipsis after *häufig* when it should have preceded it. Her emended translation (see Appendix), which makes it clear that the 15 foot trunk pertains to the palm, is as follows:

Farther upstream occasional single elms; the aforementioned *Yucca* and *Opuntias*, but less vigorous ones; not often, with trunk about 15' high, a fan palm (*Chamaerops palmetto*).

Figure 2 is a photocopy of the portion of Lindheimer's letter (1845b) containing Passage 2. A transliteration, in modern orthography, of the portion of Passage 2 pertaining to palms (the segment beginning with "not often" and ending with "*palmetto*") reads as follows:

nicht häufig aber mit ohngefähr 15 Fuss hohem Stamm eine Fächerpalme (*Chamaerops palmeto*).

The correctness of Goyne's revisions is confirmed by Lindheimer himself in "Overview of the Flora of Texas," an essay published decades later in Germany (Lindheimer 1879, p. 37). In a description of the coast, going inland from Indianola, there is a passage paralleling Passage 2 above. As translated by Goyne it reads:

A bit farther from the water *Sabal adansonii*. Farther upstream the aforementioned large *Yucca* and *Opuntia* but not as vigorous as [those] in the vicinity of the sea [Gulf]. Occasionally the palm *Sabal palmetto*.



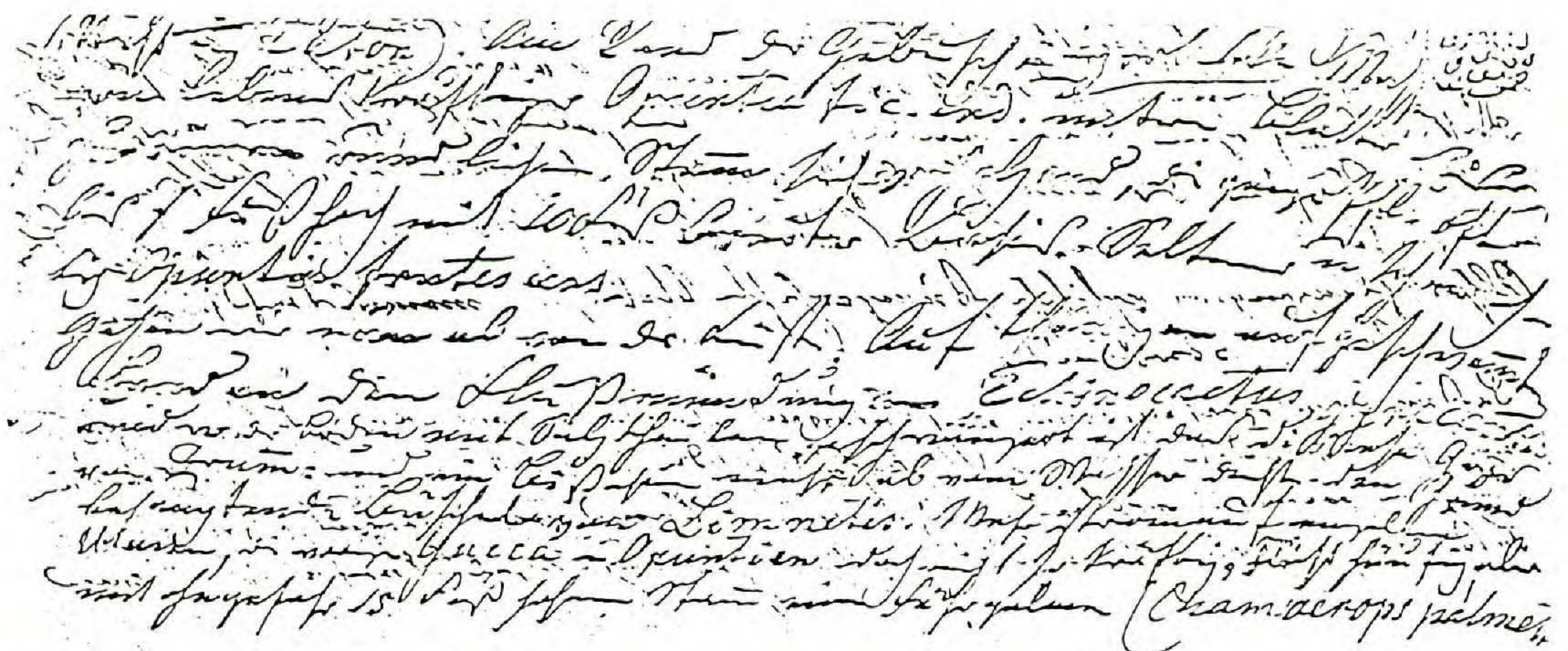


FIG. 2. Excerpt from Lindheimer letter dated "beginning of August 1845." The portion of Passage 2 pertaining to palms begins with the word *nicht* near the end of the next to last line of the excerpt, and continues till the end of the excerpt. *nicht* appears after the comma seen over the first *a* of *Chamaerops*. The transliteration reads as follows: *nicht häufig aber mit ohngefähr 15 Fuss hohem Stamm eine Fächerpalme (Chamaerops palmeto)*.

In 1845 Lindheimer had, like others in his time, incorrectly applied the genus name of a European palm (*Chamaerops*) to an American palm. In the essay he corrects this to *Sabal*. The epithet *palmetto* actually refers to a tall palm native to the southeastern United States. This error is to be expected, however, since in his time the Texas palms had not yet been identified as a species distinct from *S. palmetto*, which they closely resemble. His separate reference to *S. adansonii* (syn. *S. minor*) makes it clear his *S. palmetto* was a tall palm, and not dwarf palmetto.

Engelmann, who apparently never visited the area but was the recipient of Lindheimer's letters, also confirms Goyne's emended translations of Passages 1 and 2. In an addendum to Gray's (1850, p. 235) description of plants collected by Lindheimer during 1845-1848, Engelmann identifies the area where the specimens were collected as that drained by the Colorado, Navidad, Lavaca, Guadalupe and San Antonio rivers. In an account of the vegetation of that area he first describes the plants of the bay shore, then writes:

Some miles higher up the rivers, on the clayey soil, solitary Elms and Palm trees are seen; the prairies have a stiff black soil thickly matted with grass. The prevalent tree now becomes the Live Oak along the rivers, as well as in small groves on the prairies.

Garcitas Creek lies between the Lavaca and the Guadalupe. The Engelmann quote ("Some miles higher up the rivers"), and both Lindheimer quotes ("Farther upstream") fit the Garcitas Creek population today. Because *Sabal mexicana* is not salt tolerant, as is *S. minor*, the Garcitas Creek palm trees do not begin until about four miles upstream from the bay.



Since Engelmann writes of “rivers”, the implication of his statement is that *S. mexicana* occurred along all the rivers from the Colorado to the San Antonio. As reported in Lockett and Read (1990, pp. 82-83), the central coast population of *S. mexicana* was almost entirely removed, due to a demand for use of the trunks as wharf pilings, and for landscaping.

There is, however, evidence that the range of *S. mexicana* may have reached as far northeast as the San Bernard River. Sargent (1905, p. 109) gives the distribution of the species as “Rich soil of the bottom-lands near the mouth of the Rio Grande, in Texas, and southward in Mexico in the neighborhood of the coast.” In Sargent (1922, p. 104), however, the distribution is given as: “Rich soil of the bottom-lands on the Bernado [sic] River, Cameron County, and near the mouth of the Rio Grande, Texas, and southward in Mexico in the neighborhood of the coast.”

The Sargent (1922) statement is unclear, and partly redundant. First, there is no “Bernado River” in Cameron County, or anywhere in Texas. Second, since Cameron County is the southernmost county in Texas, and is bordered by the Rio Grande on the south and the Gulf of Mexico on the east, any place “near the mouth of the Rio Grande, Texas” is in Cameron County. But, while there is no “Bernado River” in Texas, there is the San Bernard (from Spanish: *San Bernardo*) River, which flows into the Gulf 240 miles northeast of the Rio Grande, and is the next river up the coast from the Colorado. Further, six miles southwest of the San Bernard River, in the extensive bottomland forest that covers western Brazoria County, there is a small population of tree-sized palms that appear to be hybrids of *Sabal mexicana* and *S. minor* (Lockett 1991).

In spite of the ambiguity of Sargent’s (1922) statement, we could hypothesize that sometime between 1905 and 1922 Sargent was informed, probably orally, that *S. mexicana* grew in the bottomlands of the “Bernardo River.” Since Sargent, like almost all other botanists since him (for an exception see Cook 1908, p. 5n.a; and 1913 p. 11), had theretofore believed that the Texas range of the species was restricted to the LRGV, he then assumed that the river in question must be in the LRGV. The discrepancy in spelling between the informant’s “Bernardo” (although we don’t know how this person actually pronounced it) and Sargent’s “Bernado” could be attributed to Sargent’s Bostonian speech, characterized by loss of postvocalic *r*. Since the San Bernard is little known outside of Texas, we could assume Sargent had never seen the name “Bernardo” written. Adding to the likelihood of Sargent’s misinterpretation is the fact that his informant could have also spoken with an *r*-dropping dialect, since such speech is common in Texas, especially in Brazoria County, where the hybrids occur, and through which the San Bernard flows.



In both the 1905 and 1922 editions of Sargent the description of the uses of *S. mexicana* reads as follows: "On the Gulf coast the trunks are used for wharf-piles, and on the lower Rio Grande the leaves for the thatch of houses." Aside from confirming historical evidence reported in Lockett and Read (1990, p. 82), this statement suggests the existence of two separate populations of the species—one on the "Gulf coast" and the other on the "lower Rio Grande."

Although in his letter dated 22 January 1845 Lindheimer told of collecting seeds from the tall palms he refers to, searches by curators at GH, A, MO, BH, TEX and BRIT failed to reveal any Lindheimer palm specimens other than a single specimen of *Sabal minor*. Likewise searches by curators at GH, A, BH, TEX and BRIT (including a search of Sargent's correspondence at A), failed to reveal any specimen or correspondence that would form the basis for Sargent's "Bernado River" reference.

So far as I know the only well established wild population of *S. mexicana* that, on the basis of historical evidence, does not appear to be an escape from cultivation (although it is presumably second growth) is the Garcitas Creek population. This population is scattered through the bottomland forest for several miles along the east side of Garcitas Creek, and contains many mature (reproducing) specimens. The other wild, reproducing populations known to me are apparent escapes from cultivation, and have only one mature palm each. One is along the Aransas River on and adjacent to the Wedler Wildlife Refuge; another is near the Guadalupe River, south of Victoria; and the third is along a normally dry tributary of the Medina River, 12 miles northwest of Bandera. The fact that *S. mexicana* is establishing itself in the wild in the apple-growing region of the Hill Country, almost 300 miles northwest of Brownsville, should discourage hasty assumptions about its hardiness, or just how far north it might have once ranged.

A factor that has probably contributed to the long-standing assumption that *S. mexicana* is not native north of the LRGV is the widespread belief that Spanish explorers named the Rio Grande River the Río de las Palmas, presumably because of the *S. mexicana* palms growing along its banks. According to Weddle (1985, pp. 104-105) and Chipman (1995), however, this belief, often expressed in articles and even textbooks, stems from a misinterpretation of Spanish explorers' journals. Although there is a river that was called the Río de las Palmas, it is the Río Soto la Marina, in Mexico, and not the Rio Grande.

There are probably more wild populations of *S. mexicana* in the thick bottomland forests along South Texas rivers, either as remnants of the original population, as on Garcitas Creek, or escapes. To the extent conserva-



tionists are able to locate such populations and persuade land owners to protect them, and reintroduce the species in appropriate habitat, perhaps *Sabal mexicana* can be restored to its former range. Palms with trunks of 20 to 40 feet will overtop the live oaks, creating a scene that may seem exotic to us, but apparently would have been familiar to La Salle and the Karankawas.

#### ACKNOWLEDGMENTS

I am grateful to Martha Riley (MO) for furnishing me photocopies of Lindheimer's letters; to Helga von Schweinitz and Barbara Bresslau for help in translation; to Chris Durden, of the Texas Memorial Museum, for calling my attention to the statements in Sargent; and to Del Weniger, Anders Saustrup, and the staff of the University of Texas Center for American History for help in searching for early references to palms. For their help in my search for herbarium specimens and early botanical records I am grateful to Judith Warnement of The Botany Libraries, Harvard University; to Emily W. Wood (GH, A); to Steve Spongberg, Jennifer Brown and Richard Howard (A); to James C. Solomon and Chris Dietrich (MO); to Philippe Morat (P); to Natalie Uhl (B); and to Barney Lipscomb and Yonie Hudson (BRIT). I am especially grateful to Robert Read (US) and Billie Turner (TEX) for their guidance, encouragement and interest in my research. I very much appreciate the generosity of David Marlowe, Emily Dial, Patricia Martin and Charles W. Weber, Jr. for letting me look for palms on their ranches; and of James Teer and Lynn Drawe of the Rob and Bessie Welder Wildlife Foundation for letting me stay at the foundation's wildlife refuge while searching for palms there. For helping me in this fieldwork I am grateful to my wife Carol, Mike Rayburn, Mikel Borg, George Stevenson, and H. Dixon Hoese. I also want to thank Benny Simpson, Dorothy Mattiza, William F. Mahler and the other members of the Native Plant Society of Texas for their continued help, support and recognition of my research.

Finally, I want to dedicate this article to the late Minetta Altgelt Goyne, without whose research and cooperation it would not have been possible.



## APPENDIX

Photocopy of Goynes's signed statement presenting her emended translations of Passages 1 and 2.

Below are my emended translations of passages in my book A Life among the Texas Flora: Ferdinand Lindheimer's Letters to George Engelmann (TAMUP, 1991), which emendations I undertook at the suggestion of Landon Lockett, who is conducting research into native varieties of Texas palms. On closer examination of the photocopies of Lindheimer's letters in my possession, I have become convinced that these translations should be as follows, largely because Mr. Lockett has made me aware that large palms are not unknown in the region Lindheimer was describing, information that I did not have while preparing the book for publication. The error on p. 111 resulted from illegible letters in the word that evidently was Fächerpalme (German for fan palm). The errors on p. 123 resulted from very faint punctuation marks (causing an ambiguity) and an accidentally misplaced ellipsis, which proved on closer examination to indicate the word preceding häufig (German for often/common) was nicht (German for not).

p. 111, ll. 10-13:

I collected seeds of the fan palm /"Fächerpalme"/ with trunk that is often 20' to 40' high; a large Melocactus? (perhaps the same as the one sent) grows on marshy ground.

p. 123, ll. 4-6:

Farther upstream occasional single elms; the aforementioned Yucca and Opuntias, but less vigorous ones; not often, with trunk about 15' high, a fan palm (Chamaerops palmetto).

*Minetta A. Goynes*  
Feb. 10, 1992

copies sent to Landon Lockett and Texas A&M University Press



## REFERENCES

- CHIPMAN, D.E. 1995. Alonso Alvarez de Pineda and the Río de las Palmas: Scholars and the mislocation of a river. *Southw. Hist. Quart.* 98:369–385.
- COOK, O.F. 1908. Change of vegetation on the South Texas prairies. U.S.D.A. Bur. Pl. Industr. Circ. No. 14.
- . 1913. A new ornamental palmetto in southern Texas. U.S.D.A. Bur. Pl. Industr. Circ. No. 113:11–14.
- CORRELL, D. and M. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner.
- GOYNE, M.A. 1991. A life among the Texas flora: Ferdinand Lindheimer's letters to George Engelmann. Texas A&M Univ. Press, College Station.
- GRAY, A. 1850. *Plantae Lindheimerianae*, Part II. *Boston J. Nat. Hist.* 6:141–195, 209–240.
- LINDHEIMER, F. 1845a. Letter to George Engelmann, dated Jan. 22, 1845. Archives, Missouri Botanical Garden, St. Louis.
- . 1845b. Letter to George Engelmann dated "beginning of August 1845." Archives, Missouri Botanical Garden, St. Louis.
- . 1879. *Aufsätze und Abhandlungen von Ferdinand Lindheimer in Texas*. Theodore Wentz, Frankfurt.
- LOCKETT, L. and R. W. READ. 1990. Extension of the native range of *Sabal mexicana* (Palmae) in Texas to include Central Coast. *Sida* 14:79–85.
- LOCKETT, L. 1991. Native Texas palms north of the Lower Rio Grande Valley: recent discoveries. *Principes* 35:64–71.
- SARGENT, C.S. 1905. Manual of the trees of North America (exclusive of Mexico). Houghton, Mifflin and Company, Boston and New York.
- . 1922. Manual of the trees of North America (exclusive of Mexico). Houghton, Mifflin and Company, Boston and New York.
- WEDDLE, R.S. 1985. Spanish sea: the Gulf of Mexico in North American discovery, 1500–1685. Texas A&M Univ. Press, College Station.